

REMARKS/DISCUSSION OF ISSUES

Applicants amend claims 1-8 and add new claims 14-16. Accordingly, claims 1-16 are pending in the application.

The Examiner is respectfully requested to acknowledge the claim for priority and receipt of certified copies of all the priority documents.

Claims 1-18 are amended for non-statutory reasons, to replace European-style claim phraseology with American-style claim language. The claims are not narrowed in scope and no new matter is added.

New claims are added to at least partially restore the original range of claims that existed before multiple dependencies were removed in the preliminary amendment. No new matter is added.

Applicants also acknowledge that claims 4, 5, 9 and 13 are not rejected over any prior art and therefore are deemed patentable over the prior art.

Reexamination and reconsideration are respectfully requested in view of the following Remarks.

OBJECTION TO THE DRAWINGS

The Office Action objects to the drawings as supposedly not showing every feature of the invention.

Applicants respectfully traverse this objection.

The Office Action states that "*the types of color separation utilized in the invention must be illustrated or the feature(s) canceled from the claim(s).*"

Applicants respectfully submit that the claims do not recite "color separation."

Furthermore, the Office Action does not cite any language from any claim that actually does recite a feature that is supposedly not illustrated in the drawings.

Accordingly, Applicants respectfully submit that the objection fails to identify any feature(s) actually recited in the claims that are supposedly not illustrated in the drawings.

Although Applicants decline to guess as to what feature(s) were intended to be cited, Applicants note that various claims do recite, for example, "generating

different colors in a space-multiplexed fashion” and “operable to produce a continuous spatial color split.” Applicants also respectfully submit that these features are very clearly illustrated already at least in FIGs. 3 and 4.

Accordingly, Applicants respectfully request that the Objection to the drawings be withdrawn.

35 U.S.C. § 112

The Office Action rejects claims 1-13 under 35 U.S.C. § 112, first paragraph, as supposedly not being described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicants respectfully traverse these claims for at least the following reasons.

FIG. 3 **absolutely** illustrates a relationship between lamp current in C being in phase whereas the states of A, B and D, E show an out of phase relationship. In FIG. 3, it is plainly apparent that the light output is absolutely **not** the same in all instances with respect to the color change. In case “C” it is apparent from FIG. 3 that the lamp current and sequential color cycle are in phase, as evidenced by the fact that the color light pattern, from top to bottom, R-G-B is always synchronized with the current pulse. In contrast, for example, in case B, the first time the lamp current pulse occurs, the color light pattern, from top to bottom, is R-G-B, but the next time, it is G-B-R. Thus the period of the AC cycle is clearly 2/3 the period of the sequential color cycle. Similarly, for example, in case D, the first time the lamp current pulse occurs, the color light pattern, from top to bottom, is R-G-B, but the next time, it is B-R-G. Thus the period of the AC cycle is clearly 4/3 the period of the sequential color cycle.

Applicants respectfully submit that anyone of even the most basic skill in the art would understand that.

Furthermore, Applicants respectfully submit that anyone of even basic skill in the art would understand what a “phase” of a sequential color cycle is from the description and the drawings – particularly FIG 3, the top portion of which very clearly

illustrates 1 and two periods of the sequential color cycle, showing 6 phases of those two periods (three different phases for each period). Likewise, FIG. 4 shows 1 and 1/6 periods of a sequential color cycle, illustrating six different phases within each period. In each phase, the scrolling color bands have a different relationship with respect to the light valve device on which they are being illuminated. This is deemed to be very easy to understand from the specification.

Accordingly, Applicants respectfully traverse the rejections under 35 U.S.C. § 112, first paragraph, and request that they be withdrawn.

35 U.S.C. §§ 102 & 103

The Office Action rejects: claims 1, 3, 6-8 and 10-11 under 35 U.S.C. § 102 over Marshall et al. U.S. Patent 5,706,061 ("Marshall"); claim 2 under 35 U.S.C. § 103 over Marshall; and claim 12 under 35 U.S.C. § 103 over Marshall in view of Stark et al. U.S. Patent 6,520,648 ("Stark").

Applicants respectfully traverse those rejections for at least the following reasons.

Claim 1

Among other things, in the system of claim 1 the sequential color cycle of the light valve device and the AC cycle for the illumination unit are adapted to be out of phase with each other.

The Office Action states that Marshall discloses at col. 8, lines 11-23 that "*the switching frequency of the lamp . . . is much higher than, **and multiple of**, the color wheel rotation frequency*" (emphasis added)

Applicants respectfully submit that this text appears to describe a system where the sequential color cycle of the light valve device and the AC cycle for the illumination unit are adapted to be in **phase** with each other, but where the frequency of the AC cycle is just a multiple of the frequency of the sequential color light cycle.

Therefore, Applicants respectfully traverse the rejection of claim 1.

Accordingly, for at least these reasons, Applicants respectfully request that the rejection of claim 1 under 35 U.S.C. § 102 be withdrawn.

Claims 2-3 and 6

Claims 2-3 and 6 depend from claim 1, and Applicants respectfully request that the rejection of claim 2-3 and 6 be withdrawn for at least the same reasons as set forth above with respect to claim 1.

Claim 7

In similarity to system claim 1, method claim 7 recites that the AC current cycle of the light source and the sequential color cycle are operated out of phase in relation to each other.

Accordingly, for at least the reasons set forth above with respect to claim 1, Applicants respectfully request that the rejection of claim 7 under 35 U.S.C. § 102 be withdrawn.

Claims 8, 10 and 11

Claims 8, 10 and 11 depend from claim 7, and Applicants respectfully request that the rejection of claim 8, 10 and 11 be withdrawn for at least the same reasons as set forth above with respect to claim 7.

Claim 12

Claim 12 also depends from claim 7. Applicants respectfully request that the rejection of claim 12 under 35 U.S.C. § 103 over Marshall and Stark be withdrawn for at least the reasons set forth above with respect to claim 7.

NEW CLAIMS 14-16

New claims 14-16 depend variously from claims 2 and 8 and are deemed patentable for at least the reasons set forth above with respect to claims 2 and 8.


CONCLUSION

In view of the foregoing explanations, Applicants respectfully request that the Examiner reconsider and reexamine the present application, allow claims 1-16 and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D.

Springer (Reg. No. 39,843) at (571) 283.0720 to discuss these matters.

Respectfully submitted,

VOLENTINE & WHITT

By: 
Kenneth D. Springer
Registration No. 39,843

VOLENTINE & WHITT
One Freedom Square
11951 Freedom Drive, Suite 1260
Reston, Virginia 20190
Telephone No.: (571) 283.0724
Facsimile No.: (571) 283.0740